Nurses and doctors in primary care: decisions should be based on maximizing the cost effectiveness of a system of primary care and not the dictates of historical precedent

D P KERNICK

SUMMARY

The past 10 years have seen an increase in the number of nurses working in general practice, which has been largely unplanned. On a background of limited resources and a commitment to a primary care-led National Health Service (NHS) based on team work, delivering care from a mixed team of general practitioners (GPs) and practice nurses offers an attractive model for policy makers. To date, this development has been characterized by roles reflecting historical precedent and conflicts of power. This paper argues for a break from traditional professional roles and the devolution of power across the primary health care team. Although the problems of economic analyses are recognized, the development of skill-mix should be based on considerations of cost effectiveness and not historical sentiment.

Keywords: practice nurses; general practitioners; skill-mix; cost effectiveness.

Introduction

IN the past 10 years the number of nurses employed in general practice has trebled. Practice nurses (PNs) are advising on acute problems, participating in clinics for chronic disease, and providing health education and counselling.[1] This expansion had not been centrally planned but evolved from the 1990 GP Contract. General practitioners (GPs) were encouraged to provide screening and health promotion services and did so by delegating these roles to their PNs.

The concept of skill-mix seeks to match clinical presentations with an intervention based on an appropriate level of skill and training.[2] On a background of increasing demands on limited resources, the substitution of doctors by nurses offers an attractive option for policy makers. In a literature review, Richardson[3] suggested that 30% to 70% of tasks performed by doctors could be carried out satisfactorily by nurses, with significant implications for medical manpower, but most studies were undertaken in North America where nurses have established a leading role in the provision of primary medical care. Although the concept of team working has been accepted throughout the NHS,[4] there is limited evidence of effectiveness and virtually none of cost effectiveness on which to base the expansion of the PN role within primary care.

Working in teams

Working in teams allows health professionals to contribute their unique assets towards the attainment of a common goal,[5] and a commitment to a primary care-led NHS based on teamwork between health professionals has added urgency to the debate over skill-mix. Evidence to support the traditional doctor-centred model of care where the GP provides medical continuity has not been forthcoming, and over the past decade there has been a shift in emphasis towards a multidisciplined team approach that has the flexibility to respond to rapidly changing health needs and in which the nurse generalist is seen as a core member.

Three types of relationship within a team have been defined:[6]

1. Co-active — this relationship implies a delegation of activity and implies that one member of the relationship is in a dominant position and can identify what is delegated. Delegation remains the dominant model within primary care, even though historically it has been met with some resistance by GPs.[7]
2. Competitive — in this relationship, parties are not working together towards a common goal but competing for similar roles. This model is prevalent in the United States where nurses find themselves competing with doctors over prescribing and hospital admitting rights.[8]
3. Interactive — this approach implies sharing of responsibilities and a collaboration based on equality. In this interdisciplinary model, although each practitioner offers a set of individual skills, professional boundaries are not well defined.

A recent report by the British Medical Association has suggested that the emphasis should be on continuity within the primary health care team, not on an individual practitioner,[9] and Brooks[10] has emphasized the importance of delivering health from a primary care system with the emphasis on personal responsibility, patient participation, and co-active team work. How nurses and doctors can most effectively work together in primary care teams remains to be resolved.

Models of nurse intervention — stereotypes based on historical precedent?

The context in which a nurse intervention is to be considered is the first step in any analysis. A recent document from the Royal College of General Practitioners defined the elements of effective and efficient primary care as its accessible frontline position, its longitudinal nature, its focus on the individual, its responsibility for dealing with common problems, its coordination function for integrated patient care, and its orientation towards prevention in addition to traditional clinical functions.[11] The consultation remains the central focus for resource allocation in primary care and consists of identifying and prioritizing the needs of the patients, negotiating with the patient resources that meet those needs, and improving patients' understanding and their ability to cope with their problems. Needs are often identified and met over a series of interactions. Do nurses respond to these elements in a way that is different from doctors and that can provide better outcomes in some cases? Or do they simply represent a cheaper

D P Kernick, MD, MRCGP, general practitioner, St Thomas Medical Group, Exeter.
Submitted: 11 December 1997; final acceptance: 9 July 1998.

alternative?

In 1986, the Cumberledge Report[12] recommended the introduction of the NP into primary care, suggesting that patients should be able to choose between consulting with a doctor or a nurse. Suitable roles were identified as securing compliance with therapy, making initial assessment of patients, and diagnosing and treating minor, acute illnesses. Other opinions have been proffered. English[13] identified the role of the NP as an expert in some clinical areas, practising tasks often at a high level of technical expertise with responsibility commensurate with that role, but not necessarily with the authority to go with it. Casey[14] saw nursing emerging as a scientific discipline that is distinct from, but complementary to, medicine, emphasizing the dangers of treating nurses as 'mini-doctors' and the enormous benefits that 'only nurses can offer'. Unfortunately, further clarification was not provided. Cullum[15] expected nurses to care with their hearts and minds, identify patients' actual and potential health problems, and develop research strategies to prevent, ameliorate, and comfort. This rhetoric reflects a perspective arising from an entrenched historical precedent — nowhere can a role be identified that a GP cannot offer.

In fact, the past 20 years have seen a continual erosion of the nurse as an empathetic practitioner supporting patients through their daily activities and basic needs. Changes in medical practice and an emphasis on a more independent and autonomous patient have led to a new perspective for nursing care. But, despite resistance from the Royal Colleges, partnership and flexibility are becoming the key themes within a spectrum of care characterized by complexity and uncertainty and not by unique roles that infer that nurses are different from doctors.

Figure 1 shows the range of interventions that are delivered in primary care by existing roles. Nurses and doctors are not complementary but should form part of a continuum of care that seeks to optimize health gain from an appropriate use of the skills and time of each practitioner. Nurses receive less training, accept less responsibility, and deal with less uncertainty; as a result they receive less remuneration.

Economic analysis of skill-mix

Can health economics facilitate the development of an optimum skill-mix? On a background of limited resources, an economic analysis can assist in making choices between different interventions by relating the cost of an intervention to its outcomes. Unfortunately, however, neither the derivation of costs nor the measurement of outcomes is straightforward. For example, a recent review of 20 studies that derived the unit cost of a GP consultation[16] found a range of between £3 and £11 depending on the method of costing used.

The relationship between structural and process variables to final health outcomes is tenuous, particularly over longer periods of time. Outcomes are often multidimensional and assessment may be affected by timing, while there may be difficulty attributing outcomes to specific interventions.[17] Wilson-Barnet[18] has reviewed the approaches to comparing the effectiveness of the nurse specialist with the doctor, and identifies the attribution of patient outcomes as a major difficulty. Some studies have overcome this problem by randomizing the total care of patients to either doctor or nurse and found similar outcomes,[19,20] but it would be impossible or impractical to obtain answers in all areas of care.

Studies themselves have cost implications that direct resources away from direct health care, and often there will be problems in extrapolating results to local settings. In many cases a pragmatic analysis will be required rather than a formal economic analysis, but frameworks have not yet been developed to accommodate this type of approach.

Conclusion

Three strands emerge from this paper: precedent and power, purchasing efficiency, and pragmatism.

Precedent and power

The NHS is characterized by a number of stereotyped clinical roles that have evolved over time, have been consolidated by professional association, and confirmed by legislation. Using quantitative and qualitative approaches, Bull[21] explored the main themes in the development of the clinical nurse specialist. Role ambiguity with poorly defined boundaries leading to uncertainty, and problems arising from the conflicts of power in relationship to patients, doctors, and other specialized nurses were the main areas identified.

The uneasy duality arising from the dictates of a profession is not new: on the one hand preserving the interests of its members; on the other protecting the cause of those who are served. These perspectives may not always be compatible with the challenge of a health system delivered by a flexible primary health care team. Although the environment of the Health Service has changed dramatically, professional groups still cling to their historical precedent and remain reluctant to relinquish their traditional power bases.[22] When external factors dictate change, adjustment within a profession does occur but remains within an established framework.

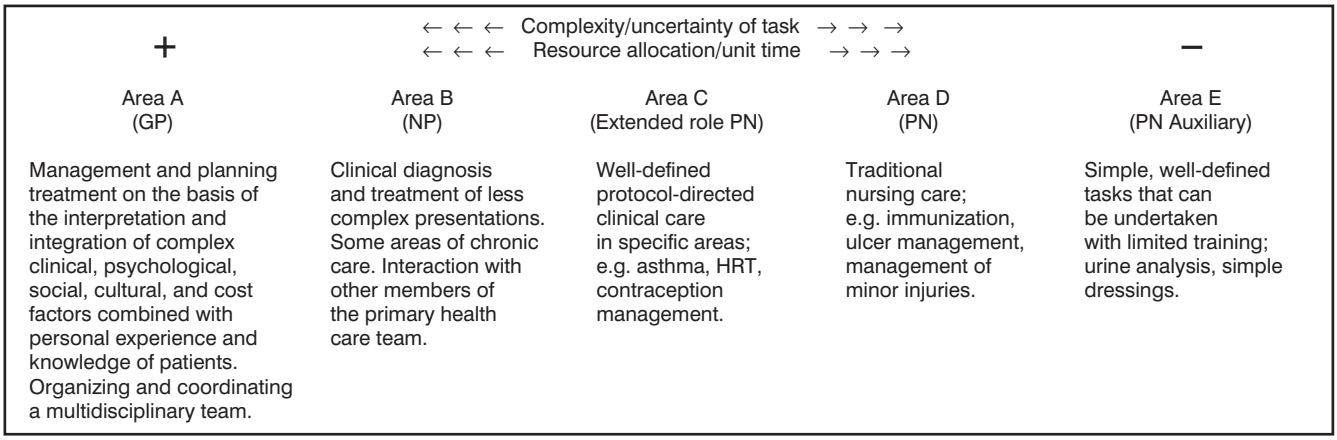

Figure 1. The spectrum of tasks undertaken in primary care (GP = general practitioner; PN = practice nurse; NP = nurse practitioner).

Rorty[23] has argued that all languages are contingent on time, place, and circumstance, and that it is impossible to make a challenge to the validity of ideas expressed in one language by using the same language. Extending this analysis to health care, it will be difficult to make a critique of individual professional roles from within the profession itself. Progress and change will come from the open challenge of one language by another. The key is the development of a mutual respect and an escape from one's own limited vocabulary of knowledge, skill, and attitudes.

Purchasing efficiency

The introduction of economic evaluation into the Health Service to facilitate intervention options is a relatively recent development. With the decentralized nature of the NHS decision-making process there is an emphasis on combining medical and economic decisions at local level but, despite recognition of the importance of economic information, decisions continue to be made with little or no evidence of cost effectiveness.[24] Clinicians may find it difficult resolving the conflicts that often arise between the economic perspectives of the individual patient, the GP practice, and society.

On a background of increasing demands on limited health budgets, there will be an emphasis on maximizing health gain from available resources. Ultimately, cost effectiveness will direct skill-mix in primary care but, owing to the complex nature of the doctor–nurse system, relevant data on which to base clinical and economic analysis may be difficult to obtain. The attribution of outcomes will be a major problem and, often, benefits may be overlooked. For example, the traditional patient–doctor relationship has been central to the therapeutic process,[25] while there may be benefits from the caring effects that the traditional nurse can provide.[26] The emphasis will be on a pragmatic approach to economic evaluation.

Pragmatism

Although the majority of GPs now accept the expansion of the PN role,[27] GPs will have to develop an environment of power sharing with practice management and clinical responsibility devolved across the whole of the primary health care team rather than a simple delegation of clinical tasks. But an exact approach to an optimization of skill-mix may remain elusive and, in many cases, the evidence base will not be accessible for a rigorous solution to be obtained. Often a pragmatic approach will be needed, deriving solutions that are satisfactory rather than optimum; drawing on evidence where it is available but recognizing its limitations and living with uncertainty when evidence is not available.

In the final analysis, the utilization of doctors and nurses should be dictated by maximizing health gain from available resources and not within an anachronistic relationship dictated by constructs of power and tradition. The doctor magic could be getting thin, and patients may prefer a health practitioner who listens and addresses their needs rather than the continuity of care supplied by the historical GP.[28] But, as Calman points out, whatever system evolves it should be underpinned by a genuine compassion that must remain the foundation of care.[29]

Key points

- There has been an unplanned three-fold expansion of nurses in primary care over the past 10 years.
- It has been suggested that between 30% and 70% of tasks performed by doctors could be carried out satisfactorily by nurses.
- At a time of increasing demands on limited resources, the development of skill-mix is an attractive proposition for policy makers.
- To date this development has been based on rhetoric reflecting historical precedent.
- The allocation of skill-mix should be directed by considerations of effectiveness and cost effectiveness.
- There are problems in obtaining clinical and economic evidence in this area.

References

1. Stillwell B, Greenfield S, Drury M, *et al*. A nurse practitioner in general practice; working style and pattern of consultation. *J R Coll Gen Pract* 1987; **37:** 154-157.
2. Rashid A, Watts A, Lenehan C. Skill mix in primary care: sharing clinical workload and understanding professional roles. *Br J Gen Pract* 1996; **46:** 639-640.
3. Richardson G, Maynard A. *Fewer doctors? More nurses? A review of the knowledge base of doctor/nurse substitution.* [Discussion paper 135.] York: University of York, 1995.
4. NHS Management Executive. *Primary care: delivering the future*. London: HMSO, 1996.
5. World Health Organisation. *Health for all*. Geneva: WHO, 1984.
6. Freeling P. Communication between doctors and nurses. In: Walter J, McLachlan G (eds). *Relationship and prejudice*. London: Nuffield Provincial Hospital Trust, 1981.
7. Bowling A. *Delegation in general practice - a study of doctors and nurses.* London: Tavistock Publications, 1981.
8. Kassiner JP. What role for the nurse practitioner in primary care? *N Engl J Med* 1994; **20:** 304-305.
9. Wilson M, Ball JG, Banks IG, *et al*. *Medical workforce.* (Taskforce of General Medical Services Committee.) London: BMJ Publishing, 1996.
10. Brooks D. Teams for tomorrow - towards a new primary care system. *J R Coll Gen Pract* 1986; **36:** 285-286.
11. Royal College of General Practitioners. *The nature of general practice.* [Report for General Practice 27.] London: RCGP, 1996.
12. Department of Health and Social Security. *Neighbourhood nursing - a focus for care*. London: DHSS, 1986.
13. English T. Personal medicine - medicine in the 1990s needs a team approach. *BMJ* 1997; **314:** 661-663.
14. Casey N, Smith R. Bringing nurses and doctors closer together. *BMJ* 1997; **314:** 617-618.
15. Cullum N, Dicenso A, Chiliska D. Evidence based nursing: an introduction. *Nursing Standard* 1997; **11(28):** 32-33.
16. Graham B, McGregor K. What does a GP consultation cost? *Br J Gen Pract* 1997; **47:** 170-172.
17. Orchard C. Comparing health outcomes. *BMJ* 1994; **308:** 1493-1496.
18. Wilson-Barnet J, Beech S. Evaluating the clinical nurse specialist. A review. *Int J Nurse Studies* 1994; **31(6):** 561-571.
19. Paykel ES, Griffith JH (eds). *Community psychiatric nursing for neurotic patients: the Springfield controlled trial*. London: Royal College of Nursing, 1983.
20. Spitzer WO, Sackett DL, Sibley JC, *et al*. The Burlington randomised trial of the nurse practitioner. *N Engl J Med* 1974; **290:** 251-256.
21. Bull R, Hart G. Clinical nurse specialist: walking the wire. *Contemporary Nurse* 1995; **995:** 425-432.
22. Berwick D. Medical Associations: guilds or leaders? *BMJ* 1997; **314:** 1564-1565.
23. Rorty R. *Contingency, irony and solidarity*. Cambridge: Cambridge University Press, 1989.
24. Coyle D. *Increasing the impact of economic evaluations on healthcare decision making.* [Discussion paper 108.] York: Centre for Health Economics, University of York, 1993.
25. Balint M. *The doctor, his patient and the illness.* London: Pitman, 1957.
26. Hart JT, Dieppe P. Caring effects. *Lancet* 1996; **347:** 1606-1608.
27. Robinson G, Benton S, White P. Attitudes towards practice nurses - survey of a sample of GPs in England and Wales. *Br J Gen Pract* 1993; **43:** 25-29.
28. Freeman G, Hjortdah L. What future continuity of care in general practice? *BMJ* 1997; **314:** 1870-1873.
29. Calman K. The impression of medicine. *BMJ* 1994; **309:** 1140-1143.

Address for correspondence

Dr DP Kernick, St Thomas Medical Group, Cowick Street, Exeter EX4 1HP.